

Trend Study 7-4-01

Study site name: Above Samak.

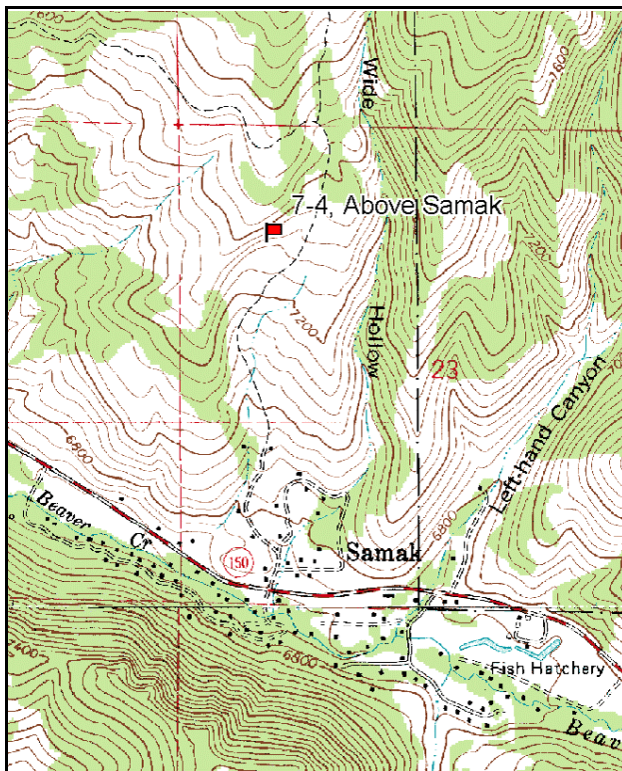
Vegetation type: Mountain Brush.

Compass bearing: frequency baseline 180 degrees magnetic.

Frequency belt placement: Line 1 (11 & 95ft), line 2 (59ft), line 3 (71ft), line 4 (34ft).

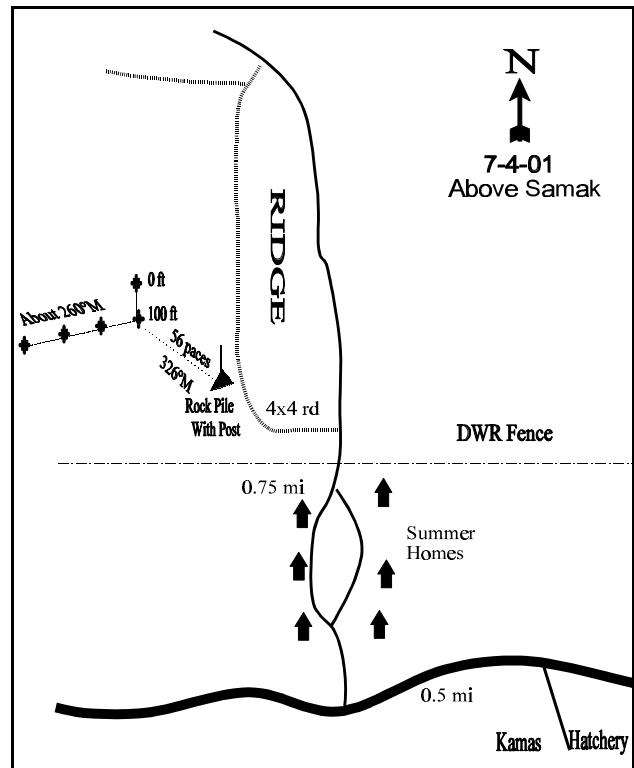
LOCATION DESCRIPTION

From the Kamas fish hatchery proceed west 0.5 miles. Turn right onto a dirt road and proceed north. The road will split (go left) around the summer houses and reunite in 0.2 miles. After passing the homes, you will come to a DWR fence and gate. Proceed 0.1 miles past the gate and turn left, proceeding up a very steep hill (4X4 recommended). After reaching the top, proceed north until you see a green steel stake in a rockpile on the left. The rockpile is 0.75 miles from the highway. From the rockpile, walk 56 paces at 326 degrees magnetic to the 100-foot stake of the baseline. The 0-foot stake is marked by browse tag #7959. The rest of the baseline doglegs at the 100-foot baseline stake and runs 260 degrees magnetic.



Map Name: Hoyt Peak

Township 2S, Range 6E, Section 22



Diagrammatic Sketch

UTM 4498170 N 479900 E

DISCUSSION

Trend Study No. 7-4

The Above Samak study is located on Division of Wildlife Resources property in Beaver Creek Canyon. The site is at a moderately high elevation (7,200 feet) with a slope of 23%. Exposure is to the southwest. This area can be classified as deer and elk winter range during more mild winters, or transitional spring-fall range during the more harsh winters. The site and surrounding area was burned and seeded in the early-1960's. Domestic livestock also graze the area during the summer. The community was originally dominated by Gambel oak with some mountain brush species and little herbaceous cover. The site is now made up of scattered openings of mountain brush and seeded grasses interspersed with Gambel oak clones. Animal use on the site is quite variable, depending on wintering conditions. There was moderate to heavy use on all browse species during the harsh winter of 1983-84. In 2001, pellet group transect data collected along the study baseline estimated 23 elk days use/acre (56 edu/ha), 31 deer days use/acre (76 ddu/ha), and 9 cow days use/acre (23 cdu/ha).

Soils on the site are very rocky and well-drained with high permeability. Cover from surface rock and pavement is moderately high at around 21%. Percent bare ground was also estimated at about 21% in 2001. Effective rooting depth was estimated at nearly 16 inches in 1996. Soil texture was classified as a clay loam with a neutral soil reaction (6.8 pH). With the high amount of rock in the upper soil profile, the moderately steep slope (23%), and the southwest aspect, this site can get rather dry during the summer. Litter and vegetative cover appears adequate to prevent serious erosion. Some "trailing" and trampling damage associated with livestock use is apparent but not serious. An erosion condition class assessment determined soils to be stable in 2001.

Browse composition consists of a mix of Gambel oak, mountain snowberry, mountain big sagebrush, Saskatoon serviceberry, and several less numerous shrubs. Gambel oak could eventually become the ecologically dominant species with suppression of fire or excessive grazing. Density was estimated at 1,360 stems/acre in 1996, increasing to 3,340 stems/acre in 2001. Oak provided 24% of the total browse cover in 1996, decreasing to 15% in 2001. The oak population has consisted of a preponderance of young plants in the past. In 2001, young plants still make up 38% of the population. Oak clones vary in height throughout the site, with the larger ones being estimated at 12-15 feet. Due to a late frost in this area in June of 2001, many of the oak showed leaf damage and death when the site was sampled in September of 2001. As a result, 18% of the plants sampled were classified with poor vigor.

Other shrub populations appear stable at the present time ('01). Browse utilization has been heaviest on serviceberry and bitterbrush in the past. Serviceberry density is estimated at just under 300 plants/acre in 1996 and 2001. Decadence has remained steady at around 20% for the last three sampling periods. In 1996 and 2001, mountain big sagebrush provided the largest proportion of the browse cover of any species at 39% and 44% respectively. Density of mountain big sagebrush was estimated at 1,180 plants/acre in 2001. Use on sagebrush was moderate to heavy in 1984, but has been more moderate to light since. In 2001, percent decadence increased from 6% to 17%. Recruitment from young plants is fairly low at only 2% of the population. Mountain snowberry had an estimated density of 1,500 plants/acre in 2001, which provides an additional 29% of the browse cover. In 2001, annual leader growth averaged 1.3 inches for mountain big sagebrush and 2.3 inches for serviceberry.

The composition of the herbaceous understory is dominated by seeded species, primarily grasses. Smooth brome, crested wheatgrass, and intermediate wheatgrass are all very common. These three species contribute to over half of the total herbaceous cover in 1996 and 2001. Crested and intermediate wheatgrass decreased in nested frequency in 2001, although neither was a statistically significant decline from the 1996 frequency

values. Grasses showed evidence of heavy grazing in the past, but currently show only light use. Alfalfa, also a seeded species, is the most abundant forb on the site in terms of cover. Alfalfa showed utilization in 2001. It was characterized as low growing with a sprawling growth form.

1984 APPARENT TREND ASSESSMENT

Soil trend appears stable to improving. This area has a very rocky, well-drained soil with good cover from vegetation, litter, and rock. During the period from 1977 to 1984, there appears to have been some improvement in vegetative cover. The apparent erosion rate is minimal. Depending upon location, vegetative trend also appears stable to improving. On previously unburned sites, mature oakbrush prevails over a good grass-forb understory. These burned areas still have developing oak and other browse populations. However, oak is the likely dominant. Grasses and forbs seem relatively stable. Seeded grasses appear especially persistent and should continue to provide the bulk of livestock and early spring big game forage.

1990 TREND ASSESSMENT

The data indicates several changes in the mountain big sagebrush population. There has been a significant decline in sagebrush density (from 2,399 plants/acre to 1,665 plants/acre), there are few seedlings and young, and the amount of hedging is somewhat lighter compared to 1984 levels. The reduced vigor and increased percent decadence is most likely related to moisture stress (extended drought) and competition. Sagebrush cover averages about 9%. Oakbrush has not expanded, although there are a large number of young sprouts. Grass abundance is high due to the presence of seeded grasses. Grass species identification was difficult due to heavy utilization before the study was sampled in mid-September. Total sum of nested frequency for grasses was higher. Frequency and density of alfalfa is unchanged and remains, along with low penstemon, the most common perennial forb. There were slight shifts in the percentage of litter and basal vegetative cover, but the percentage of bare soil remained stable.

TREND ASSESSMENT

soil - stable (3)

browse - slightly down for sagebrush (2)

herbaceous understory - stable (3)

1996 TREND ASSESSMENT

The trend for soil is slightly up with percent bare ground declining to less than 10%, and the nested frequency for grasses and forbs showing substantial increases. As on other sites, the key browse species (mountain big sagebrush) is now stable at a lower density. Vigor has improved and percent decadence is only 6%. Browse trend is stable at this time. The herbaceous understory has improved slightly with increased sum of nested frequency values for both grasses and forbs.

TREND ASSESSMENT

soil - slightly up (4)

browse - stable (3)

herbaceous understory - up slightly (4)

2001 TREND ASSESSMENT

Soil trend is slightly down. Bare ground increased from 10% to 21%, and percent litter cover declined from 45% to 35%. Even with these changes in ground cover parameters, soil erosion is minimal at the present time. Trend for browse is stable. Mountain big sagebrush slightly decreased in density and level of use, but

increased in percent decadence. However, the current level of decadence (17%) is not extreme, while recruitment remains fairly low (2%). The herbaceous understory shows a stable trend. Perennial grasses slightly decreased in sum of nested frequency, conversely perennial forbs have increased in sum of nested frequency in 2001. Seeded species remain dominate on the site, especially smooth brome.

TREND ASSESSMENT

soil - slightly down (2)

browse - stable (3)

herbaceous understory - stable (3)

HERBACEOUS TRENDS --

Herd unit 07 , Study no: 4

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
G	Agropyron cristatum	_{ab} 117	_a 100	_b 145	_{ab} 124	55	45	51	49	5.53	2.86
G	Agropyron dasystachyum	_a -	_a -	_a -	_b 11	-	-	-	6	-	.27
G	Agropyron intermedium	_a 55	_a 47	_b 103	_{ab} 77	28	28	39	28	4.07	1.88
G	Agropyron spicatum	26	20	16	5	10	9	9	3	.46	.04
G	Bromus inermis	243	267	249	266	85	85	78	86	12.64	10.56
G	Bromus japonicus (a)	-	-	-	3	-	-	-	1	-	.03
G	Poa bulbosa	_a -	_a -	_{ab} 3	_b 9	-	-	1	5	.00	.16
G	Poa fendleriana	_a -	_b 20	_a 1	_a 5	-	8	1	2	.00	.18
G	Poa pratensis	-	4	-	-	-	1	-	-	-	-
G	Poa secunda	3	8	7	14	2	4	5	6	.10	.25
G	Stipa lettermani	-	7	-	-	-	3	-	-	-	-
Total for Annual Grasses		0	0	0	3	0	0	0	1	0	0.03
Total for Perennial Grasses		444	473	524	511	180	183	184	185	22.83	16.22
Total for Grasses		444	473	524	514	180	183	184	186	22.83	16.25
F	Achillea millefolium	5	4	1	2	2	3	1	1	.06	.03
F	Agoseris glauca	-	-	-	3	-	-	-	1	-	.00
F	Allium acuminatum	_{ab} 10	_b 18	_a 6	_a -	6	11	3	-	.04	-
F	Alyssum alyssoides (a)	-	-	-	2	-	-	-	1	-	.00
F	Allium spp.	_a -	_a -	_a -	_b 27	-	-	-	11	-	.10
F	Arabis spp.	-	4	4	9	-	3	3	4	.04	.07
F	Astragalus convallarius	3	2	6	-	1	1	2	-	.06	-
F	Astragalus spp.	_a -	_a -	_a -	_b 15	-	-	-	9	-	.34
F	Calochortus nuttallii	-	-	-	4	-	-	-	2	-	.01
F	Chaenactis douglasii	-	-	1	-	-	-	1	-	.00	-
F	Cirsium spp.	1	6	-	-	1	2	-	-	-	-
F	Comandra pallida	-	-	-	5	-	-	-	3	-	.07
F	Collinsia parviflora (a)	-	-	_a 31	_b 86	-	-	14	31	.14	.33

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
F	Cryptantha spp.	_b 20	_a -	_a -	_a -	8	-	-	-	-	-
F	Epilobium brachycarpum (a)	-	-	-	2	-	-	-	1	-	.00
F	Erigeron pumilus	_b 15	_b 10	_b 15	_a -	7	5	7	-	.13	-
F	Eriogonum racemosum	-	-	-	7	-	-	-	3	-	.09
F	Machaeranthera canescens	_b 35	_a 6	_a 4	_a -	17	3	3	-	.04	-
F	Medicago sativa	42	40	55	59	18	19	29	30	2.96	4.21
F	Microsteris gracilis (a)	-	-	_a -	_b 51	-	-	-	24	-	.22
F	Penstemon humilis	55	55	55	29	23	25	23	14	1.02	.32
F	Petradoria pumila	_a -	_a -	_b 25	_b 38	-	-	10	14	1.08	2.44
F	Phlox longifolia	_a -	_{ab} 8	_{ab} 2	_b 9	-	3	1	5	.00	.05
F	Polygonum douglasii (a)	-	-	_b 21	_a 3	-	-	8	1	.04	.00
F	Ranunculus testiculatus (a)	-	-	_a 21	_b 94	-	-	9	32	.07	1.78
F	Senecio integerrimus	_a -	_a 2	_a -	_b 12	-	1	-	6	-	.08
F	Veronica biloba (a)	-	-	117	116	-	-	47	40	.46	.50
F	Verbascum thapsus	_a -	_a -	_a -	_b 28	-	-	-	9	-	.48
F	Zigadenus paniculatus	-	2	4	4	-	2	4	2	.09	.06
Total for Annual Forbs		0	0	190	354	0	0	78	130	0.72	2.84
Total for Perennial Forbs		186	157	178	251	83	78	87	114	5.55	8.38
Total for Forbs		186	157	368	605	83	78	165	244	6.27	11.23

Values with different subscript letters are significantly different at alpha = 0.10 (annuals excluded)

BROWSE TRENDS --

Herd unit 07 , Study no: 4

Type	Species	Strip Frequency		Average Cover %	
		'96	'01	'96	'01
B	Amelanchier alnifolia	13	12	1.27	1.42
B	Artemisia tridentata vaseyana	39	38	6.27	8.01
B	Chrysothamnus depressus	0	1	-	-
B	Chrysothamnus viscidiflorus viscidiflorus	3	7	.12	.06
B	Mahonia repens	34	35	.90	.21
B	Opuntia spp.	0	0	-	-
B	Purshia tridentata	1	2	.03	.48
B	Quercus gambelii	19	21	3.82	2.72
B	Symphoricarpos oreophilus	29	36	3.82	5.22
Total for Browse		138	152	16.25	18.13

BASIC COVER --

Herd unit 07 , Study no: 4

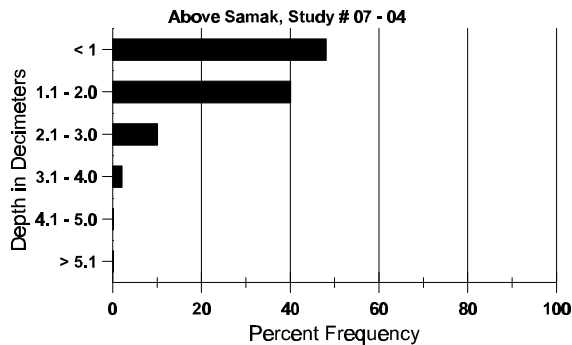
Cover Type	Nested Frequency		Average Cover %			
	'96	'01	'84	'90	'96	'01
Vegetation	366	360	5.00	11.00	44.96	44.24
Rock	254	225	12.50	13.25	16.81	15.30
Pavement	177	239	9.25	15.00	3.97	5.63
Litter	393	371	54.75	40.50	45.09	35.33
Cryptogams	38	12	0	.75	.66	.33
Bare Ground	221	262	18.50	19.50	9.90	21.62

SOIL ANALYSIS DATA --

Herd Unit 07, Study no: 04, Above Samak

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
15.6	N/A (N/A)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Stoniness Index



PELLET GROUP FREQUENCY --

Herd unit 07 , Study no: 4

Type	Quadrat Frequency		Pellet Transect	
	'96	'01	Pellet Groups per Acre 01	Days Use per Acre (ha) 01
Rabbit	-	1	17	N/A
Elk	8	17	296	23 (56)
Deer	12	8	400	31 (76)
Cattle	3	4	113	9 (23)

BROWSE CHARACTERISTICS --

Herd unit 07 , Study no: 4

Field Unit 07, Study No. 4																		
A	Y	Form Class (No. of Plants)									Vigor Class				Plants	Average		Total
G	R	1	2	3	4	5	6	7	8	9	1	2	3	4	Per Acre	(inches)		
E																Ht. Cr.		
Amelanchier alnifolia																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	2	-	-	2	-	-	-	133		2	
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	84	-	1	-	-	-	-	-	-	-	1	-	-	-	66		1	
	90	1	1	-	-	-	-	-	-	-	2	-	-	-	133		2	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	84	-	1	5	-	-	-	-	-	-	6	-	-	-	400	40	37	6
	90	-	-	2	-	-	-	-	-	-	2	-	-	-	133	34	30	2
	96	1	-	7	1	1	1	-	-	-	11	-	-	-	220	31	43	11
	01	-	2	2	1	1	4	-	-	-	10	-	-	-	200	29	33	10
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	1	-	-	-	-	-	-	1	-	-	-	66		1	
	96	-	-	2	-	1	-	-	-	-	2	-	-	1	60		3	
	01	-	2	-	-	1	-	-	-	-	2	-	-	1	60		3	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	40		2	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		29%			71%			00%			-29%							
'90		20%			60%			00%			-16%							
'96		14%			71%			07%			- 7%							
'01		46%			46%			08%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	466	Dec:	0%			
												'90	332		20%			
												'96	280		21%			
												'01	260		23%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches)		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4		Ht.	Cr.	
Artemisia tridentata vaseyana																		
S	84	3	-	-	-	-	-	-	-	-	3	-	-	-	200		3	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	01	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
Y	84	-	10	-	-	-	-	-	-	-	10	-	-	-	666		10	
	90	-	1	-	1	-	-	-	-	-	2	-	-	-	133		2	
	96	3	-	-	-	-	-	-	-	-	3	-	-	-	60		3	
	01	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
M	84	-	10	11	-	-	-	-	-	-	21	-	-	-	1400	20	29	21
	90	6	10	-	-	-	-	-	-	-	13	1	2	-	1066	19	23	16
	96	19	36	4	-	-	-	-	-	-	59	-	-	-	1180	21	35	59
	01	22	19	6	1	-	-	-	-	-	48	-	-	-	960	25	34	48
D	84	-	2	3	-	-	-	-	-	-	5	-	-	-	333		5	
	90	3	2	2	-	-	-	-	-	-	6	-	-	1	466		7	
	96	-	4	-	-	-	-	-	-	-	4	-	-	-	80		4	
	01	3	5	2	-	-	-	-	-	-	5	1	2	2	200		10	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	280		14	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	200		10	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		61%			39%			00%			-31%							
'90		52%			08%			12%			-21%							
'96		61%			06%			00%			-11%							
'01		41%			14%			07%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	2399	Dec:	14%			
												'90	1665		28%			
												'96	1320		6%			
												'01	1180		17%			
Chrysothamnus depressus																		
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	01	-	1	-	-	-	-	-	-	-	1	-	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%										
'01		100%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	0%			
												'90	0		0%			
												'96	0		0%			
												'01	20		100%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Chrysothamnus viscidiflorus viscidiflorus																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	3	-	-	-	-	-	-	-	-	3	-	-	-	60	12	17	3
	01	9	-	-	-	-	-	-	-	-	9	-	-	-	180	10	12	9
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%			+67%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	60		-			
												'01	180		-			
Mahonia repens																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	59	-	-	3	-	-	1	-	-	63	-	-	-	4200			63
	96	5	-	-	-	-	-	-	-	-	5	-	-	-	100			5
	01	16	-	-	-	-	-	-	-	-	16	-	-	-	320			16
M	84	237	-	-	-	-	-	-	-	-	237	-	-	-	15800	4	6	237
	90	5	-	-	6	-	-	1	-	-	12	-	-	-	800	4	5	12
	96	139	-	-	-	-	-	-	-	-	139	-	-	-	2780	3	5	139
	01	186	-	-	42	-	-	-	-	-	228	-	-	-	4560	3	3	228
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%			-68%							
'90		00%			00%			00%			-42%							
'96		00%			00%			00%			+41%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	15800	Dec:	-			
												'90	5000		-			
												'96	2880		-			
												'01	4880		-			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Opuntia spp.																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4	8	0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%										
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	0		-			
												'01	0		-			
Purshia tridentata																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	-	1	-	-	-	-	-	-	1	-	-	-	20	11	41	1
	01	-	1	-	1	-	-	-	-	-	2	-	-	-	40	19	68	2
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			100%			00%			+50%							
'01		50%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	20		-			
												'01	40		-			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Quercus gambelii																		
S	84	46	-	-	-	-	-	-	-	-	46	-	-	-	3066		46	
	90	47	2	-	11	-	-	3	-	-	59	2	2	-	4200		63	
	96	11	-	-	-	-	-	-	-	-	11	-	-	-	220		11	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	84	32	118	-	-	-	-	-	-	-	150	-	-	-	10000		150	
	90	90	13	-	23	-	-	-	-	-	115	11	-	-	8400		126	
	96	29	6	-	-	-	-	-	-	-	35	-	-	-	700		35	
	01	50	-	-	14	-	-	-	-	-	64	-	-	-	1280		64	
M	84	-	23	16	-	-	-	-	-	-	39	-	-	-	2600	47 37	39	
	90	2	9	-	2	-	-	-	-	-	13	-	-	-	866	58 29	13	
	96	21	10	-	-	-	-	-	-	-	31	-	-	-	620	31 25	31	
	01	69	-	-	-	-	-	-	12	-	64	-	17	-	1620	51 20	81	
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	19	3	-	1	-	-	-	-	-	17	1	3	2	1533		23	
	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
	01	19	-	-	3	-	-	-	-	-	9	-	10	3	440		22	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	200		10	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	420		21	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		75%			08%			00%			-14%							
'90		15%			00%			03%			-87%							
'96		24%			00%			00%			+59%							
'01		00%			00%			18%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	12600	Dec:	0%			
												'90	10799		14%			
												'96	1360		3%			
												'01	3340		13%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Symphoricarpos oreophilus																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	1	-	-	-	-	-	-	-	-	-	-	-	-	66		1	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	84	-	2	-	-	-	-	-	-	-	2	-	-	-	133		2	
	90	2	-	-	-	-	-	-	-	-	2	-	-	-	133		2	
	96	6	-	-	-	-	-	-	-	-	6	-	-	-	120		6	
	01	7	-	-	-	-	-	-	-	-	7	-	-	-	140		7	
M	84	-	14	-	-	-	-	-	-	-	14	-	-	-	933	18 29	14	
	90	3	4	2	11	-	-	-	-	-	17	-	3	-	1333	14 15	20	
	96	17	21	1	7	-	-	-	-	-	46	-	-	-	920	16 31	46	
	01	60	-	-	6	-	-	-	-	-	62	4	-	-	1320	15 28	66	
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	3	2	-	3	-	-	-	-	-	1	-	3	4	533		8	
	96	-	2	6	-	-	-	-	-	-	4	-	-	4	160		8	
	01	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		100%			00%			00%			+47%							
'90		20%			07%			33%			-40%							
'96		38%			12%			07%			+20%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	1066	Dec:	0%			
												'90	1999		27%			
												'96	1200		13%			
												'01	1500		3%			
Tetradymia canescens																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0	8 20	0	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%										
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-			
												'90	0		-			
												'96	0		-			
												'01	0		-			